

The claims

1. A signal transmission method in a wireless base station system, said wireless base station system comprising a first base station, a second base station and a wireless networks control device, wherein the first base station and the second base station are able to jointly share channel processing task of a cell of the first base station, the method comprising:

in the downlink direction,

transmitting by the wireless network control device a part or all of downlink data frames to the base station to which their channel processing relates for processing;

receiving by the first base station corresponding downlink wireless signals from the base station which the channel processing of the cell's downlink data frames relates to; and

transmitting by the first base station the downlink wireless signals for the cell; and

in the uplink direction,

receiving by the first base station uplink wireless signals of the cell;

distributing by the first base station a part or all of the uplink wireless signals to the base station to which their channel processing relates for processing;

receiving by the wireless network control device corresponding uplink data frames from the base station which the channel processing of the cell's uplink wireless signal relates to;

wherein the base station which the channel processing of

the downlink data frames relates to, or the base station which the channel processing of the uplink wireless signals relates to comprises at least the second base station.

2. The method of claim 1, further comprising a step of transmitting channel configuration information in the cell from the first base station to the second base station sharing the channel processing task.

3. The method of claim 1, wherein the base station which the channel processing of the downlink data frames relates to and the base station which the channel processing of the uplink wireless signals relates to both comprise the second base station.

4. The method of claim 1, wherein the second base station comprise more than one base stations.

5. The method of claim 1, further comprising a step of: when the base station which the channel processing of the uplink wireless signals relates to comprises more than one base stations, the uplink data frames belonging to the same cell are merged into one flow of uplink data of the cell in the wireless network control device.

6. The method of claim 1, further comprising a step of: when the base station which the channel processing of the downlink data frames relates to comprises more than one base stations, the downlink data frames are separated in the wireless network control device in order to be transmitted to corresponding base stations.

7. The method of claim 1, further comprising a step of: when the base station which the channel processing of the downlink data frames relates to comprises more than one base

stations, the wireless network control device transmit the same downlink data frames to the base stations.

8. The method of claim 1, further comprising a step of: when the base station which the channel processing of the downlink data frames relates to, the base station which the channel processing of the uplink wireless signals relates to, or the channel processing task shared by the base station changes, signaling is applied to perform synchronous switching between the base station and the wireless network control device.

9. The method of claim 1, further comprising a step of: providing configuration information to indicate the correspondence between the base station and the cell channel processing task shared by it.